

TAAA DESERT SKIES BULLETIN

Observing Our

Since



Desert Skies

1954

April 2023

www.tucsonastronomy.org

Membership Meeting

April 7 @ 6:30 pm - 9:00 pm

TAAA's next general member meeting will be held on **Friday, April 7, 2023**. The Main Presentation will start at 6:30 PM (AZT). This will be a **hybrid meeting** (both in person and on social media). TAAA members will receive a Zoom link should they wish to attend remotely. The public may attend in person at the **Steward Observatory Lecture Hall (Rm N210), 933 N Cherry Ave., Tucson** or online through our [Facebook page](#). (A recording will be available on [YouTube](#) a few days after the meeting)

Main Presentation at 6:30PM AZT

Title: Fun Observing Projects with Zero Equipment

Presentation: According to author and educator, Bob King, you don't need a telescope to explore the underpinnings of the universe. A pair of eyes will do. In this month's presentation, Bob will share three visual observing projects — exploring Earth's shadow; observing and measuring naked-eye sunspots and getting a sense of the Milky Way Galaxy's three-dimensional structure. As he explains, "Through close examination of the natural world, we open ourselves to the possibility of discovery, whether that means gaining a new perspective or noticing new details in familiar phenomena."

Biography: Bob King fell in love with the night sky and astronomy when he was a kid and loves to share his passion with people of all ages through teaching and public observing.

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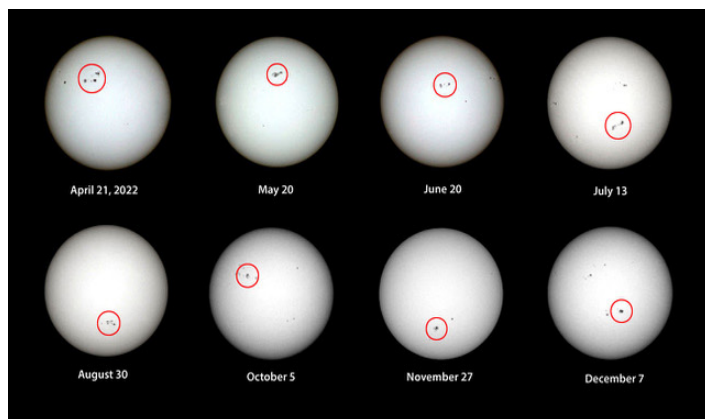
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Bob King's Naked Eye Sunspot Observations from 4/22-12/22

A graduate of the University of Illinois (Champaign-Urbana), he's a long-time member of the American Association of Variable Star Observers (AAVSO), a community educator, writes the monthly Celestial Calendar for Sky & Telescope magazine as well as the Explore the Night blog for their website. Bob also pens the long-time blog called Astro Bob, which he started in 2008. He comes to us tonight via zoom from Duluth, Minnesota, on the north shore of Lake Superior.

TAAA Desert Skies Bulletin

[David Rossetter](#) – Editor; Ken Bertschy - Graphics

Terri Lappin & Jim Knoll - Proofreading; Greg Ruppel -Image Editor

Notes From The President

March 2023

As is the usual case in TAAA as Spring arrives, March has been a busy month with movement toward Spring and summer (even with some gray skies and showers). We made it through the Tucson Festival of Books with probably our highest number of quality activities and visitors ever; Evening Under the Stars is being organized at CAC for April 8th; planning for the Tucson Astronomy Festival April 29th is well underway; requests for applications for volunteers for the Grand Canyon Star Party, June 10-17, have been posted; planning is underway on the new TIMPA-16 Project; NVRC is requesting candidates for the TAAA May Election; pictures for next year's TAAA Calendar have been requested; Ladies Night Out may have had its highest attendance ever; Star Party requests are zooming in before the school year ends; ten copies of Tim Hunter's new book and ten copies of David Levy's latest book were donated and most included in the member raffle at the March Member Meeting; and the Bulletin for March was filled with 23 pages of great information, including a number of beautiful images! Construction at CAC continues to develop, and our TAAA Board is diligently fulfilling a variety of important tasks in being conscientious guardians of TAAA. Just getting perspective on it all can be overwhelming!! Think of the energy in this club!!

We have been having some requests from non-TAAA members to borrow or rent telescopes. Please help us in communicating that TAAA does not have any program that allows us to lend or rent telescopes to non-members. TAAA loaner scopes are available to members ONLY, and we do not have a program that allows us to rent out telescopes to the public. With the generosity of some TAAA members and a national program, TAAA has donated nine

by Mae Smith

telescopes to libraries, and those libraries have a program that TAAA helped them to develop in which they manage the check out and use of those telescopes to persons with library cards. The library telescopes are smaller, child-friendly ones.

The TAAA Board at the March meeting approved a new TAAA Apparel Position Description, facilitating the further re-activation of the Apparel program which includes not only the sale to members of items in the apparel catalog but also sale to TAAA members of pre-approved name tags, license plates for the front of vehicles, and stickers. Please note that from pre-COVID to the present, there have been some larger than hoped for price increases. The Board also passed a revised Donation Equipment Disposal Policy and an updated Donation Equipment Manager Position Description as well as reviewed a new project being worked on by the Treasurer and President to create some Board pre-approved lists of TAAA vendors, contractors and affiliates. It is expected that the latter new project will take some time to fully complete, but the Board has started a beginning list. The TAAA 990 (report to IRS) was received back from the accountant, but on the day of the Board meeting, so it was not able to be reviewed and vetted prior to the meeting. It is hoped that a vetted copy will be available for Board action at the April meeting. Members may wish to also note that many of the TAAA Position Descriptions are at least six or seven years old and in need of updating. An updating process has begun. Also, should you encounter anything on the website which you believe needs updating, let us know so that the Technology Committee can review it.

President [Mae Smith](#)

Board of Directors Meetings

The TAAA Board meets the second Wednesday of every month at 6:30pm. Members are welcome to attend Board meetings. If you would like to attend a Board meeting, you may email Mae Smith to receive a Zoom link for that meeting. Please send your email to Mae the Monday or Tuesday (By 5:00pm) and you will receive an email with the link on either Tuesday evening or Wednesday. ALL MEMBERS ARE WELCOME.

Committee Reports



By Pete Hermes

TAAA Election 2023

The TAAA Leadership Election closes on May 5, 2023, at the monthly Membership Meeting. The NVRC will present their slate of nominees at the April 7th Membership Meeting. Keep in mind, if you are really interested in running for a leadership position on the Board of Directors or the Nominations and Volunteer Resource Committee, you need to let the NVRC know right away! [Note: We still have no candidates for one open position on the TAAA Board (At-Large Member) and one open position on the Nominations and Volunteer Resource Committee. Please contact the NVRC at nvrcchair@tucsonastronomy.org, even if you do not regularly reside in southern Arizona, all or part of the year]. If you miss the deadline of the end of March, you can still nominate yourself (or nominate someone else with their permission) as a “write-in” candidate up to one week before the election. The nominee’s name will be put on the ballot.

Timeline

- March – Final Candidate Interviews and Selection.
- April 7 – Announce nominees before (via email) and introduce at Membership Meeting
- After April Meeting up to One Week Prior to May Meeting – Write-In Candidates
- One Week Prior to May Membership Meeting up to 7:00 of meeting – Vote!
- Announce Vote Results during Members-only portion of May meeting

Voting Procedures This Year

- We will be using a Voting Service named OpaVote for this election
- Voting will be all electronic over the Internet
- An email will be sent to all eligible members with a link to vote on 4-29-2023
- Voting will be open from 4-29-2023 until 7:00 PM at the May 5, 2023 General Membership Meeting

Pete Hermes – Chair, John Christensen, Allen Force, Dave Pass

Book Of the Month
By Douglas Smith (TAAA Librarian)

The Sky at Night

By Tim Hunter (TAAA member).

The book is well written. The author does an excellent job with terminology and explaining various astronomical topics. I found some of the information about famous astronomers interesting. This book is clearly intended for an audience that is either uneducated in astronomy or very new to the hobby. For that audience it is a useful read and I would recommend it as such. The book contains many useful tips for the backyard naked eye stargazer or the binocular observer. For the advanced amateur astronomer this book would have limited usefulness.

About \$17 on e-bay.



EVENING UNDER THE STARS

Free Star-Gazing Event

hosted by the Tucson Amateur Astronomy Association

Date/Time: Saturday, April 8th / 7:00 PM

Place: Chiricahua Astronomy Complex (Turkey Creek area)

Reservations Required

Contact: John Kalas (jckalas@cox.net) for reservation and directions



Grand Canyon Star Party (GCSP) 2023 registration is now open. You can get the specifics and register to be an astronomer or apply for one of the complimentary campsites at the [GCSP Webpage](#).

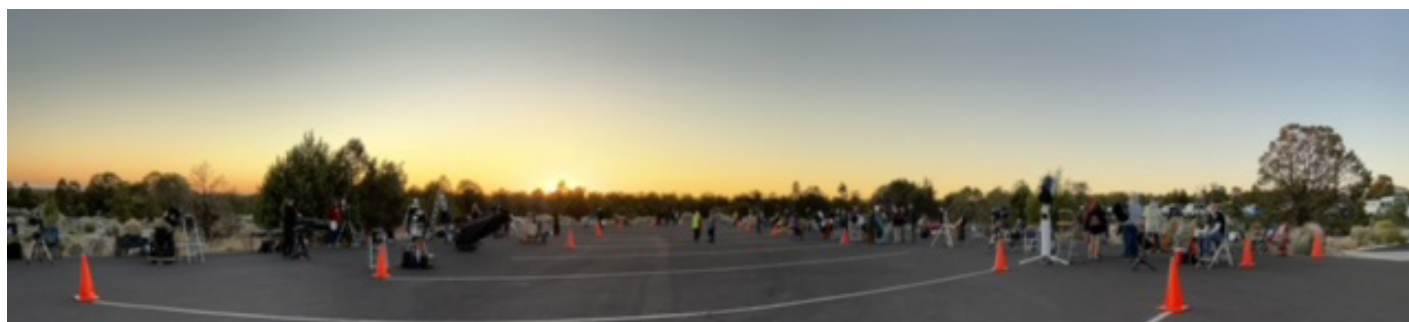
The event will go from **June 10 - 17, 2023**

[Jim Knoll](#)

Grand Canyon South Rim Director



Crowd at evening talk, 2022. By Jim Knoll



Telescope Field, 2022 By Jim Knoll

TAAA 2024 Calendar

Please consider submitting images for the TAAA 2024 Wall Calendar. We always hope to include as many different contributors and as many different types of objects as possible.

Images of deep sky and solar system objects need not be recent. Post processing is optional. We can also use "landscape" photos – pictures of astronomical objects against local terrain.

We always welcome pictures of club events.

Due to the requirements of the publisher's software, images must be in JPG format.

Please contact [Susan OConnor](#) if you are interested in having your images in the calendar

Solar Filter Workshop Announcement

With the upcoming Annular Solar Eclipse this October and the Total Solar Eclipse in April 2024, AFSIG will be hosting two workshops to build your own solar filter. The filters are purpose built to your camera lens, telescope, or binoculars and you can choose from one of two films for the filter: Seymour (which produces an orange sun) or Baader film (which produces a whitish sun).



Baader Film on the lower right and Seymour film on a 63mm lens on the left.

The **first** workshop is tentatively planned for the first or second weekend of August 2023 in Tucson so you can have the filters ready for the October Annular Solar Eclipse. The second workshop date is TBD but expect it to be December 2023 or January 2024. If you are interested in the August workshop, please email fundamentals@tucsonastronomy.org with the following information **by June 15th, 2023**

- Your Name
- The aperture size of the camera lens, binocular, or telescope you would like to build a filter for
- If you prefer the first or second weekend of August

Common Questions

- Will I have to be a club member to participate?
 - Yes, you will need to be a member. The workshop will not be open to non-members.
- How much will the filters cost?
 - \$15 per filter, maximum 4 per person
- When will I have to pay?
 - The fee will be due on the time of the workshop. Payment method TBD.
- Will I need to buy 2 filters if I am making them for binoculars?
 - For safety reasons this is strongly encouraged, but you can choose to build only one filter but will have to leave a lens cap on the non-filtered lens to prevent eye injury.
- Can I get one each of Baader and Seymour film?
 - Yes
- Is there a limit on the size of the filter?
 - Please limit the aperture size of your optics to 4 inches / 100mm to ensure we have enough material for both workshops.

TAAA Equipment Loaner Program

The following inventory represents the current list of instruments contained in the Tucson Amateur Astronomy Association Equipment Loan Program as of September 04, 2022. A photograph of each item is included with the description. These telescopes are kept in good working order and are stored at Timpa. This equipment is for TAAA members to checkout and use. Email [Ralph Means](mailto:Ralph.Means@taaa.org) or call at 520-460-8770 for information or to schedule time for pick up.



Celestron 11" CPC series
Alt-Az fork mounted, with tripod and
GOTO. We have 2 of these telescopes.



Orion SkyWatcher 12" Collapsible
Dobsonian with 8x50 finder



Orion SkyWatcher 10" Dobsonian
with Tetrad



Orion SkyQuest 10" Dobsonian with Tetrad



Meade LX200 10" SCT, Fork Mount, GOTO, with 8x50 finder, in case.
With tripod. Training required.



TAAA Equipment Loaner Program (Continued)



Orion 10" Dobsonian black tube, 8x50 finder



Meade 4" SCT in case, with tripod, battery pack, diagonal, and 2 eyepieces



Celestron 8" SCT, Single Fork mount, GOTO



Celestron 6" SCT, single fork mount, GOTO with tripod.



Celestron Nexstar 6" SCT, diagonal, and eyepiece



Orion SkyQuest XT-10 classic 10" Dobsonian, f 5.0, 1.25 focuser, 8x50 finder, push-to.



Stellar Vue 85mm Refractor

TAAA Equipment Loaner Program (Continued)



Eye Piece Case #1: Black Orion Case, 5 1.25-inch Celeron Multi Coated X-Cell LX eyepieces. 25mm, 18mm, 12mm, 9mm, 7mm focal lengths. 6x30 finder and diagonal.



Eye Piece Case #2



Eye Piece Case #3



Eye Piece Case #4: Black Case. 5 Celeron X-Cell 1.25" eyepieces. Focal Lengths: 25mm, 18mm, 12mm, 9mm, 7mm



Eye Piece Case #5: Black case, Eyepieces: 2" Celeron E-Lux 40mm, VLW 13mm 1.25", Meade 2" QX 26mm, VLW 17mm 1.25", Orion 9mm Pluss 1.25", Orion 6mm Kellner 1.25", Unknown 32mm Kellner .965", Unknown 25mm Ortho 1.25", Unknown 20mm Kellner 1.25", Unknown crosshair 1.25" eyepiece
Eyepiece Filters: 2" Extension Tube, 2" nebula filter, 1.25" extension tube, 3x Barlow 1.25" Orion diagonal dielectric mirror



Eye Piece Case #6. Small Silver case. 8 Meade Super Plossl 1.25" eyepieces. Focal Length: 40mm, 32mm, 26mm, 20mm, 15mm, 12mm, 9.7mm, 6.4mm 12mm Illuminated reticle 1.25" eyepiece. 1.25" diagonal.



Case #7. Silver Case. Misc. A couple of eyepieces and numerous filters.

CAC Learning Center Construction Update - by Ed Foley

We are quite lucky at TAAA to have a combination of members generous with their time and also generous with the funding we need to develop our membership dark sites. As the completion of the CAC learning center approaches we had identified two needs for the area which will enhance and protect the buildings. We designed a road to give easier access without having to travel through the center of the site potentially disturbing viewing, and the need to build a barrier to divert monsoon rains from the buildings. Through a generous (anonymous) member, we received \$16,000 toward these projects defining our budget. We put the project out to bid with a commercial contractor and discovered we would need more than \$36K to complete these two projects. With a team of TAAA volunteers put together, looking for the best source for materials (some of it already around our CAC site), renting an earthmoving machine were able to complete the work within the amount of the donation.

We were able to build 400 feet of diversion berm with the member machine operator Bob Rose, and his assistant operators Ed Foley, Jim Knoll and John Kalas. Also at the site, moving dirt, compacting gravel, digging out mesquites, moving rocks and spreading gravel on our roadway were members Phil Yehle, Dave Evans, Larry Stepp, Joe Jacoby and Susan Knoll.

As an added bonus, while we had the machine, we cleared the area between the Reynolds-Mitchell Observatory and the new buildings, created a new pathway from the member pads to the new buildings (and restroom) and laid the base material for the northern entrance to the sleeping room buildings.



Bob at the Controls

Jim Getting Instructions From Bob



CAC Learning Center Construction Update - Continued



Easement road to Learning Center

Gravel in Learning Center
Parking Lot



The Water Diversion Berm



Stinger Pad Area Levelled



TAAA Volunteers Removing Mesquites



Skid Steer Operator John Kalas

Special Interests Groups



Starry Messengers Special Interest Group

Opening Minds to the Universe

Tucson Astronomy Festival

The Tucson Astronomy Festival takes place this month on Saturday, April 29th. In its tenth year, this is the largest public event held in Tucson hosted by the TAAA. We'll have telescope observing from 3pm to 9pm, and hands-on activities from 3pm to 5pm. We're looking for member support with telescopes during the afternoon and evening as well as help with the hands-on activities. These activities are generally brief and easy to learn, so "on-the-job" training will be provided. Just show up and let us know you're there to help with the hands-on activities.

The Tucson Astronomy Festival takes place at Brandi Fenton Memorial Park, 3482 E. River Road. This is where Alvernon Way becomes River Road. We'll be at Ramada 1 and scopes will be set up on the grassy field directly north of the ramada. Parking is not permitted on the grassy area, but the parking lot is immediately adjacent to the area where scopes will be located.

Setup begins at 1pm. Telescopes for solar observing can start setting up at 2pm. The public will start arriving at 3pm. Telescopes for night viewing should be set up and ready for observing by 7pm. The event ends at 9pm and we have until 10pm to vacate the park.

In our publicity, we will encourage the public to bring their telescopes with the offer of helping them learn how to use it. If you'd like to help the public in this way, let [Jim Knoll](#) know. He'll be coordinating that activity. Any questions about the Tucson Astronomy Festival can be emailed to smsig@tucsonastronomy.org.

Tucson Festival of Books-UA Science City

Last month, the TAAA participated in the Tucson Festival of Books (TFOB) and the concurrent UA Science City. A total of 20 TAAA volunteers provided over 120 hours of their time over the two-day event. The weather was wonderful, though there was still snow on the ground on Friday as we were setting up. The total number of contacts was 4735. This does include some people who were double counted if they visited both the booth and the telescopes. That's the second highest number of contacts for this event in the fourteen years that we've participated in the TFOB.

Several people told me our kid's activity was the best they'd seen this year. Kids and adults looked at images through red, green, or blue filters, seeing a different image through each filter. Our absorption spectrum activity and the infrared camera activity, both targeting older kids and adults, helped them understand the work being done by the James Webb Space Telescope. Many people expressed appreciation for the results coming from the JWST and could see how those results complement the data taken by the Hubble Space Telescope.

Starry Messengers will hold a special gathering on Saturday, April 15th. Information will be emailed to SMSIG members about this special event.

If you have questions about the Starry Messengers SIG, contact [Terri Lappin](#) or call 520-977-1290.



Jim Knoll with kids

TAAA Ladies' Night Out

by Susan O'Connor

Ladies' Night Out is a social interest group for women members of the club. The group meets once a month at a restaurant for fellowship and conversation. This month's meeting is:

Thursday, April 20, 6:30pm

Polish Cottage

4520 E Broadway
(S side of Broadway between Columbus and Swan)

Preview the menu at polishcottageaz.com

RSVP [Susan](#) - 520-780-0136

Astronomy Fundamentals SIG

Come join us for a presentation from the fundamentals of amateur astronomy. Learn your way around the night sky to add to your observing enjoyment. Meetings are on the second Thursday of each month.

The next meeting is on **Thursday, April 13th at 6:30 pm - 8:00 pm**. Topics to be determined.

Contact [Connor Justice](#) for Zoom link and more information.

[AFSIG on the Web](#)

Access videos of previous meetings in the TAAA's [YouTube Channel](#).

Astro-Imaging SIG

by Gregg Ruppel

The next AISIG meeting is **Monday, April 17th @ 7:00 pm** via ZOOM.

Topics: TBA

Email [Gregg Ruppel](#) for the ZOOM link or find it in the [TAAA Forum](#).

Contact [Gregg Ruppel](#) for the latest information and Zoom links. Look for previous meetings on the [TAAA YouTube Channel](#). Gregg and the AISIG folks are very active on the [TAAA groups.io](#) forum. Check out all the helpful advice and amazing images there. For more information or instructions on how to join the forum, check out the [TAAA Forum](#).

Highlights from the Astro-Imaging SIG

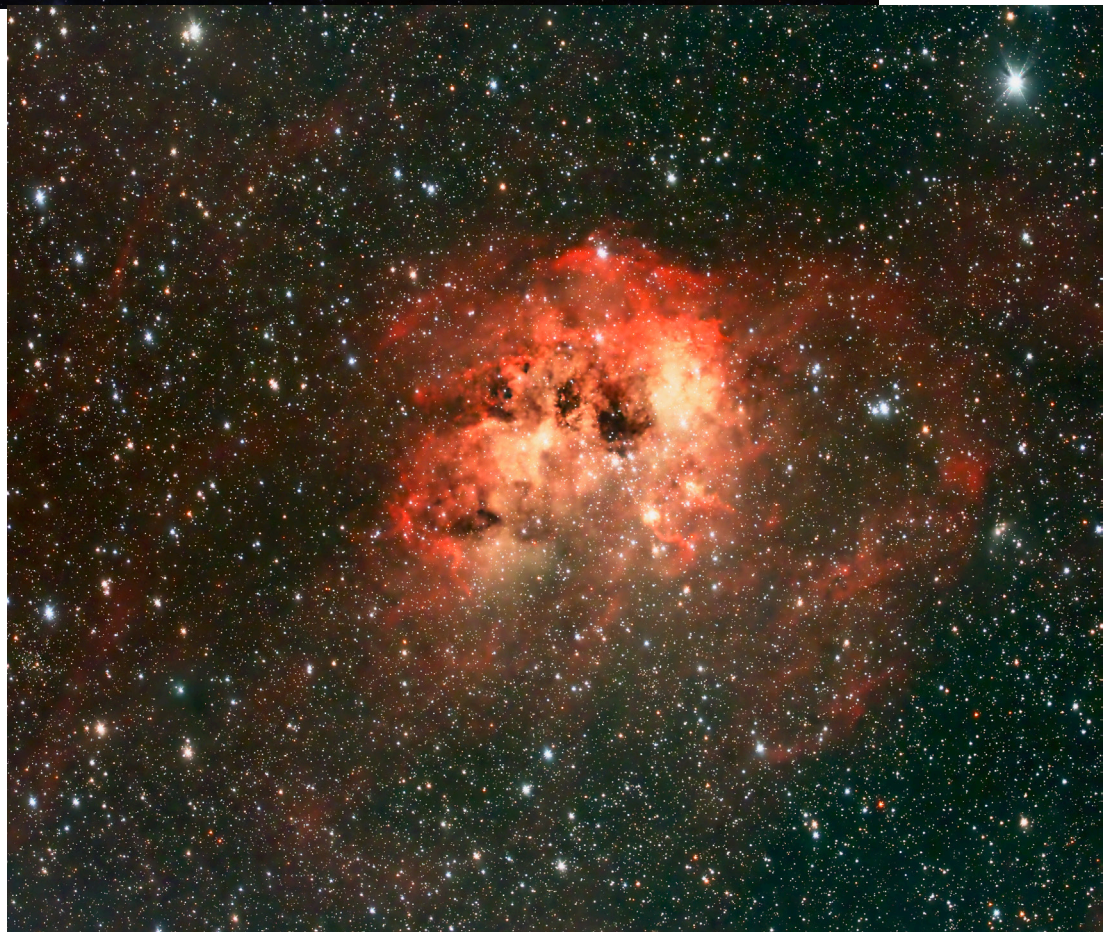


Craig Harding

Sh2-261
Lower's Nebula

John Tsantes

IC 410





Randy Smith

Witch Head Nebula

66x90 C11 HyperStar 2600 MC Pro Optolong L-Pro filter. <https://astrob.in/nl7ryl/0/>



Tom Eby

Cone Nebula

Illuminated by the bright star S Mon which also lights up surrounding blue reflection nebulosity, the image shows the Ha Cone Nebula which is about 7 light years long. Also old star cluster Trumpler 5 is at far left. The textured Foxfur nebula is below the Cone. Various dark and emission nebulosity in this busy region. Crops show



Allen Force - Rosette Nebula <https://www.astrobin.com/byl6q3/>



Alan Rockowitz

NGC 3184

All pre and post processing done in PI. 140mm iStar refractor on a 10 Micron 1000 mount.

It consists of:
 45 x 120s Blue
 47 x 120s Green
 48 x 120s Red
 30 x 300s Ha

Observing Sites

TIMPA

by Ralph Means

TIMPA (Tucson International Modelplex Park Association), dark sky site west of the Tucson Mountains.

TIMPA Star Party Dates this month: **April 21 - 22**

[TIMPA on the Web](#)

Location: The TIMPA observing site is located a few miles beyond the Desert Museum (3250 N. Reservation Road, Tucson, AZ 85743).

The TIMPA site is only partially improved. There are no inside buildings provided other than restrooms. TAAA does not provide seating (members are welcome to bring folding chairs). Please note that members visiting the TIMPA site may encounter things commonly found in partially improved desert areas such as desert creatures and/or their remnants (such as gopher holes or ant hills), uneven terrain, weeds, and desert pollens. Members using the site are encouraged to bring red lights and to move cautiously taking appropriate safety measures. The site does not have potable water, so bring your own non-alcoholic drinks.

[Reservation Form](#)

Any questions, please contact the TIMPA Director: [Ralph Means](#)

Chiricahua Astronomy Complex

by Jim Knoll

CAC Weekend Dates coming up (Friday/Saturday): **April 21-22 (New Moon 19)**

Chiricahua Astronomy Complex (CAC) is the club's dark sky observing site, located in Cochise County approximately 100 miles southeast of the center of Tucson. If you would like to attend, you must make a reservation on the CAC Web page at [CAC Reservations](#). The reservations page has been enhanced with cancellation links. This allows members to more easily cancel a previous space or telescope reservation.

Unless you are qualified to open and close the site, dates will be limited to those around the New Moon and are listed on the CAC web page. Hosted personnel are generally on site a few days before and after these dates.

TAAA has many generous members and we thank you for that generosity. We are always in need of funding assistance to further develop the site. If you have a Required Minimum Distribution from your IRA or want to do a direct roll-over from an IRA or 401K, check with your Financial Advisor for the proper form and it may be Tax Free to you. Please consider donating to support your world class astronomy complex.

CAC Director:

[Jim Knoll](#)



[CAC on the Web](#)

Observing Sites Star Party Dates 2023

TIMPA

April 21-22

May 19-20

June 16-17

CAC

April 21-22 (New Moon 19)

May 19-20 (New Moon 19)

June 16-17 (New Moon 17)

YOUR CHIRICAHUA ASTRONOMY COMPLEX

By Jim Knoll

Have you seen an incredibly dark sky recently? Want an excuse to get out of Tucson. Come out to one of our member weekends at the Club's Chiricahua Astronomy Complex (CAC). One upcoming event includes our semi-annual *Evening Under the Stars* April 8th where we open the site to our neighbors and residents around Tucson. Members are also invited. For a reservation, email John Kalas at jckalas@cox.net. We will have several telescopes operating to include the big 40-inch and 9-inch in the Reynolds-Mitchell Observatory (RMO) and the 14-inch Wally Rogers Observatory (WRO) + some personal scopes. If you want to help with the event, please let me know.



Don't own a telescope or want to observe with something bigger than what you have? How about seeing the Milky Way arch high overhead or opening the skies to incredible views with



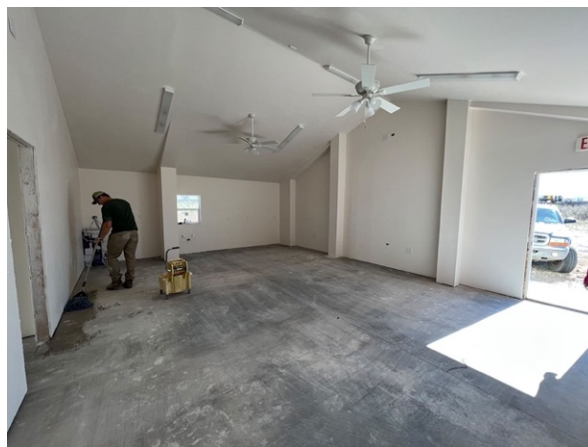
huge precision telescopes? CAC has that and more. We have a variety of telescopes you can operate for personal use or for events we share with the public. For personal observing, we have the WRO 14-inch Celestron, an 18-inch Obsession, a 9 1/4 and 11-inch Celestron, a 12-inch Meade, an 80 mm Lunt Solar Telescope, and several Dobsonians to

practice finding objects in the night sky or finish one of your Astronomical League programs. These scopes must remain at CAC for observing on-site. For outreach events, you can also be trained to operate the RMO 40-Inch "Big Boy" or the 9-Inch Folded Refractor. Being able to show the public views through these amazing instruments and seeing their reaction is priceless!



We will very soon have 10 sleeping rooms members can reserve while observing at CAC along with a classroom we can do astronomy outreach and education for youth groups and other organizations around Southern Arizona. Help us advertise our education mission with any groups you may be

involved with. And we will need members to help us do these activities and help with site maintenance and would love to have your assistance. We have several RV parking spots for those with an RV and a huge tent area if you want to sleep “under the stars”. Within the very near future (probably this Fall), we will have an Open House to commemorate these fantastic additions and to celebrate what I think is one of the top five Amateur Astronomy Complexes in the country. A facility we should all be proud of!!



For more information on CAC, visit the CAC webpage at:

<https://tucsonastronomy.org/taaa-member-resources/observing-sites/chiricahua-astronomy-complex/>

You can also email me at cac-director@tucsonastronomy.org with any questions or if you want to volunteer to help with any projects or be trained on a telescope.

From The Editor - David Rossetter

So much great information in the TAAA Desert Skies Bulletin this month! In addition to our regular features, we have an important report from our Nomination and Volunteer Resource Committee (hint: you want to get involved in elected club leadership!), two wonderful “book reports” from club authors, an amazing report about our club Equipment Loaner Program (we have some great stuff to borrow!), and lots of good information from the folks out at the Chiricahua Astronomy Complex. Don’t forget about the TIMPA site’s previous updates.

I want to thank all the members who contribute to this publication. There is so much going on in this organization (as outlined in Mae’s “Notes from the President”) that none of us could keep up without the great articles written by our leaders and members. And I cannot forget our amazing astro-imagers and creative column writers.

Remember, you can be among these contributors. I am always looking for reports and photos from observing sessions, star parties, committees, and group meetings. How about fiction stories or poetry? I’m open to creativity, as well. Thanks for all you all do!

[David Rossetter](#)

TAAA Desert Skies Bulletin Editor

School/Public Star Party Requests

by Bernie Stinger

Thank you for volunteering your time and talents for our extremely important outreach mission. Below is the updated list for April, 2023. April is still very busy with activity so appreciate any help you can provide as there are still many events to fill, in particular lots of demand for **Solar Scopes**.

If you are new to Star Party outreach, let me know and we'll be sure to help you get started. **It is important you sign up for star parties if you plan to attend**, whether you bring a scope or help in other ways, so I can manage who from TAAA will be on-site and for you to be included in any reminder or weather emails.

The PUBLIC Astronomy Events are also listed on the [TAAA](#) and [Night Sky Network](#) (NSN) calendars. Also, all PUBLIC star parties will be listed on the TAAA Facebook events page and will be updated based on weather, etc. in real-time. You can follow any of those events and get a notification when I update the event. Again, this is only for PUBLIC star parties listed on Facebook.

The requests have been updated as of March 24th. ***Stared events and bolded telescope references** still have need for volunteers. If you can help out please contact me at: astronomy-events@tucsonastronomy.org

***Friday - April 14 -- FAR SOUTH (GREEN VALLEY)**

Pima County Natural Resources Parks & Recreation (NRPR) - **Canoa Ranch**
5375 S I-19 Frontage Road
Age/Grade Level: All Ages; # Participant: 50 - 75

1 addition Scope Needed

Setup Time: 6:45 pm Start: 7:30 End: 9:30

Nearest Moon Phase: 3rd Quarter

Directions: I-19 South to Exit 56. Cross under the interstate and take the frontage road north to the park entrance.

Viewing Location: Open area - center of complex.

***Friday - April 14 -- SOUTHEAST TUCSON - Solar event**

Vail Academy

7762 E Science Park Drive
K - 12 grades; # Participants: hundreds (claimed)

1 NSN Toolkit & 2 additional Solar Scopes Needed -White light or H-alpha

Setup Time:

NSN Toolkit: 3:30 pm Start: 4:00 End: 7:00

Solar Scopes: 3:30 pm Start: 4:00 End: 6:00

Directions: From Tucson drive south on Kolb to just before I-10. Go south on E. Science Park Dr. for 1.4 miles. School is on the right side of road.

Viewing Location: Toolkit: Inside TBD, Scopes: soccer field located at the end of the school parking lot.

***Saturday - April 15 -- Chiricahua Mountains Chiricahua National Monument**

12856 E Rhyolite Creek Rd, Willcox, AZ
Age/Grade Level: All Ages; # Participants: 75

1 additional Scope Needed

Setup Time: 7:00 pm Start: 7:30 End: 9:30

Nearest Moon Phase: 3rd Quarter

Directions: Total distance is 100 miles from I-10 Houghton Exit. Take I-10 East to Exit 336 (Willcox). East on AZ 186 (Maley St in Willcox). Travel 40 miles to Monument. Turn on AZ 181 for 4 miles to Park Entrance.

Viewing Location: Faraway ranch parking area.

Sunday - April 16 -- FAR WEST TUCSON

UA Astronomy Program - ASTR 203

Redhills Visitor Center @ Saguaro National Park -- WEST. 2700 N Kinney Rd.

Age/Grade Level: College; # Participants: 65
Filled - 0 Scopes Needed

Setup Time: 7:00 pm Start: 7:30 End: 9:30

Nearest Moon Phase: 3rd Quarter

Directions: Connect to Kinney Road either by way of Ajo Way or over Gates Pass. Go north on Kinney Road, continuing north from Gates Pass Road. Continue past the Desert Museum. Kinney road forks with the left fork becoming Mile Wide and the right fork making a sharp turn into Saguaro National Park. Continue into the Park until you reach the Red Hills Visitor's Center.

Viewing Location: Redhills Visitor Center lower lot.

School/Public Star Parties Continued

Tuesday - April 18 -- EAST TUCSON

Saguaro National Park EAST

Saguaro EAST is located at 3693 S Old Spanish Trail.

Age/Grade Level: All Ages; Est. # Participants: 50
Filled - 0 Scopes needed.

Setup Time: 6:45 pm: 7:30 pm End: 9:30 pm
Nearest Moon Phase: New

Directions: I-10 Exit 275. North on Houghton for ~8 miles to Escalante. East on Escalante for 2 miles to Old Spanish Trail. N on Old Spanish for .3 miles to Park. ALTERNATE: Houghton/22nd St. south on Houghton to Old Spanish Trail. East (left) on Old Spanish Trail 2.8 miles to Park.

Viewing Location: Admin/HR area. After entering Park, make first right and proceed to HR/Admin area parking.

Wednesday - April 19 -- WEST TUCSON

Cooper Center for Environmental Learning

5403 W Trails End Rd

Age/Grade Level: Grade 5; # Participants: 50
Filled - 0 Scopes needed.

Setup Time: 7:00 pm Start: 7:30 End: 9:00 pm.
Nearest Moon Phase: New

Directions: West on Grant Rd, becomes Silverbell, becomes Ironwood Hills Drive which dead-ends at Camino De Oeste. Turn south. ALTERNATE: West on Speedway west of I-10. North on Camino De Oeste. Both paths: Turn west on Trails End Road and follow signs to "Cooper Center".

Viewing Location: Open area near restroom facilities. Access the site from the dirt road at the east end of the main parking lot (near the dumpsters).

Thursday - April 20 -- WEST TUCSON

Cooper Center for Environmental Learning

5403 W Trails End Rd

Age/Grade Level: Grade 3; # Participants: 60
Filled - 0 Scopes needed.

Setup Time: 7:00 pm Start: 7:30 End Time: 9:00
Nearest Moon Phase: New

Directions: See above.

Viewing Location: See above.

Thursday - April 20 -- PEARCE, AZ

Sunsites Library

Pearce, Az

Age/Grade Level: All; # Participants: 20

Filled - 0 Scopes needed.

Setup Time: 7:00 pm Start: 7:30 End: 9:00 pm

Nearest Moon Phase: New

Directions: Pearce AZ

Viewing Location: TBD

Friday - April 21 -- FAR WEST TUCSON

Pima County Natural Resources Parks and Recreation (NRPR) - **Tucson Mountain Park**

Ironwood Picnic Area

7300 W Hal Gras Road

Age/Grade Level: All Ages; # Participants: 70

Filled - 0 Scopes needed

Setup Time: 6:45 pm. Start: 7:30 End: 9:30 pm.

Nearest Moon Phase: New

Directions: On Kinney Road, 1.5 miles south of Gates Pass Road or 3.8 miles north of Ajo Way.

Viewing Location: Right side of road (parking pullout) near the 2nd restroom facilities (right side of road) at the Ironwood Picnic area (~3/4 of way into picnic area or approximately .6 miles

***Friday - April 21 -- SUNIZONA, AZ**

Sunizona Alice Woods Public Library;

Age/Grade Level: All; # Participants: 10+

1 Additional Scope Needed

Setup Time: 7:00 pm. Start: 7:30 pm. End: 9:00

Nearest Moon Phase: New

Directions: Pearce AZ, the location of the event will be in the school's back parking lot which would be the first left after turning left onto Ash Creek Rd. from Hwy. 181

Viewing Location: The faculty parking lot of Ash Creek School.

***NEW Friday - April 21 -- SOUTHWEST TUCSON**

Anna E Lawrence School

4850 W Jeffrey Rd

Age/Grade Level: 3 - 8; # Participants: 30

2 Scopes Needed

Setup Time: 7:00 pm. Start: 7:30 pm. End: 9:30

Nearest Moon Phase: New

Directions: West on W. Valencia Rd to S Mark Rd. Head south on S Mark Rd toward W Tillery St (.5 mile), Turn left onto W Jeffrey Rd (.2 mi).

Destination on the left

Viewing Location: North or West side of school.

School/Public Star Parties Continued

***Saturday – April 22 -- EAST TUCSON**

Saguaro National Park EAST

Saguaro EAST is located at 3693 S Old Spanish Tr
Age Group: All Ages; Estimated #
Participants: 50

2 additional Scopes needed.

Setup Time: 6:45 pm Start: 7:30 End Time: 9:30

Nearest Moon Phase: New

Directions: I-10 Exit 275. North on Houghton for ~8 miles to Escalante. East on Escalante for 2 miles to Old Spanish Trail. N on Old Spanish for .3 miles to Park

entrance. ALTERNATE: Houghton/22nd St. south on Houghton to Old Spanish Trail. East (left) on Old Spanish Trail 2.8 miles to Park entrance.

Viewing Location: Admin/HR area. After entering Park, make first right and proceed to HR/Admin area parking lot.

***Saturday - April 22 — ORACLE AZ**

Oracle State Park

3820 E Wildlife Dr, Oracle AZ
Age/Grade Level: All Ages; # Participants: 200

2 additional Scopes needed

Setup Time: 7 pm. Start: 7:30 pm. End: 9:30

Nearest Moon Phase: New.

Directions: Highway 77 (Oracle Road) north from Tucson. Follow signs to Oracle State Park.

Viewing Location: Sidewalk along the Kannally Ranch House parking lot and on the Ranch House upper patio. Some manual movement of equipment may be required to access.

Saturday – April 22 -- MARANA

Ora Mae Park – Town of Marana Parks & Recreation

13250 N Lon Adams Rd, Marana, AZ
Age Group: All Ages; Estimated #
Participants: 50

Filled - 0 Scopes needed.

Setup Time: 7:00 pm Start: 7:30 pm End: 9:30

Nearest Moon Phase: New

Directions: Intersection of Lon Adams Rd and W. Barnett Rd.

Viewing Location: One of the open playing fields-TBD.

*** New - Sunday – April 23 -- Southeast Tucson - Solar**

Tanque Verde Foundation - Tucson RC Club

10801 E Valencia Rd., Tucson
Age Group: All Ages; Estimated #
Participants: 200

1 additional Solar Scope needed – White light or H-alpha

Setup Time: 12:30 pm Start: 1:00 pm End: 5:00

Directions: Just East of Houghton on Valencia

Viewing Location: TBD

Tuesday – April 25 -- WEST TUCSON

Cooper Center for Environmental Learning

5403 W Trails End Rd
Age/Grade Level: Grade 5

Participants: 35

Filled - 0 Scopes needed

Setup Time: 7:00 pm. Start: 7:30 pm. End: 9:00

Nearest Moon Phase: New

Directions: See previous

Viewing Location: See previous

Saturday - April 29 -- CENTRAL TUCSON

Astronomy Festival @ Brandi Fenton Park

LOTS OF VOLUNTEERS REQUESTED!! (With or without telescopes to help)

3482 E River Road (River & Alvernon)

Age/Grade Level: All Ages

Scopes Needed: As many as possible for Solar & Night Observing – let me know!

Night Sky Network Toolkits: As many as possible for interactive projects with the public – inform Terri and copy me.

Extra volunteers: to help anyone bringing a personal telescope to learn how to use it.

NSN Toolkits & Solar: Setup: 2 pm. Exhibits & Observing: 3 pm - Sunset.

Evening Observing: Setup: 6:30pm Start 7 End 9 Helping with personal telescopes 3 - 9 pm.

Advise what time slot & activity you can support.

Nearest Moon Phase: First Quarter.

Directions: Enter Park from intersection of River and Alvernon.

Viewing Location: Open Grass Field near main Ramada. Interactive exhibits at the Ramada.

Saturday - April 29 -- Central Tucson - UofA

UofA School of Music/Honors College

UofA Mall – Flandrau Planetarium

Age/Grade Level: All; # Participants: 50

Filled - 0 Scopes needed

Setup Time: 7:00 pm. Start: 7:30 pm. End: 9:30

Nearest Moon Phase: 1st Quarter

Directions: Cherry and University Ave.

Viewing Location: On the UofA Mall in front of Flandrau Planetarium

What's Up list for April – May 2023

Fellow amateur astronomers. Many of the Astronomical League observing programs can be done from our backyards. The following is a list of objects visible during April and May for the more common observing programs.

Constellation Hunter Program – Northern Skies

The following constellations are well placed for observing for April and May:

Cancer, Canes Venatici, Coma Berenices, Leo, Leo Minor, Sextans, Ursa Major

Messier Observing Program

The following Messier Objects are well placed for observation during April and May (listed in ascending RA):

M81, M82, M95, M96, M105, M108, M97, M65, M66, M109

Lunar and Binocular Observing Program

The following is a list of the dates for the lunar phase when observations should be made during April and May:

New Moon: April 20, May 19

40 Hours waxing: April 22, May 21

72 hours waxing: April 23, May 24

4 days old: April 24, May 23

7 days old: April 27, May 27

10 days old: April 1, May 30

Full (14 days old): April 6, May 5

Gibbous: April 13, May 12

72 hours waning: April 17, May 16

40 hours waning: April 18, May 17

Solar System Observing Program

The following list describes the various solar system objects and their visibility during April and May:

Mercury is an early evening object for all of April reaching greatest elongation on April 11. It becomes an early morning object during May.

Venus is an early evening object during April and May.

Mars is still well placed for evening observations. On April 1 it sets around 1 AM, on May 31 it sets around 11 PM.

Jupiter is an early morning object during April and May. It rises earlier each day. By May 31 it rises about 1.5 hours before the Sun.

Saturn is a late night/early morning object. On April 1 it rises around 4:30 AM. By May 31 it rises around 12:30 AM.

Uranus is setting earlier each night during April, going behind the Sun around May 7, becoming an early morning object during the remainder of May.

Neptune is an early morning object in April and May. On April 1 it rises around 5:30 AM. By May 31 it rises around 1:30 AM.

Urban Observing Program

The following deep sky objects are well placed for observing during April and May:

M81, M82, NGC 3242

The following Double Star is well placed for observation during April and May:

Gamma Leo



Steward Observatory Public Evening Lecture Series

We are thrilled to be able to celebrate 100 years of presenting lectures on astronomy and telescope viewing to the public by offering a special Public Evening Lecture on the 100th Anniversary of the very first Steward Public Evening. Please save the dates for the following Public Evening Lectures, which will **begin at 7:30 p.m. in Steward Observatory Room N210 and on ZOOM at the URL: <https://arizona.zoom.us/j/4470189357>**

All of the lectures and the use of the telescope are free of charge and open to the general public. For more information, go to the [Evening Lecture Series page](#). You can click [here](#) to stream podcasts of previous Public Evening Lectures.

| | | |
|---------|---|---|
| Apr. 10 | Dr. Everett Schlawin Steward Observatory | JWST's First Stares at Planets that Peek in Front and Behind their Stars |
| Apr. 24 | Dr. Christopher Impey Distinguished Professor Steward Observatory | Worlds Without End: Exoplanets and the Search for Life Beyond Earth Book-signing for Prof. Impey's new book Worlds Without End after the lecture |



College of Science Myth Busting Science | Lecture Series

The College of Science hosted the 2023 Lecture Series on Myth Busting Science this winter. Four renowned University of Arizona faculty presented talks debunking common misconceptions in society and applied state-of-the-art scientific methods solving critical problems. It is not too late to watch the lectures!

Check [here](#) for speaker and lecture information..
Click [here](#) for lecture recordings on YouTube.



COLLEGE OF SCIENCE

**LUNAR & PLANETARY
LABORATORY**

LPL Colloquia

Click links for more information

[Tuesday, April 11, 2023 - 3:45pm](#)

Dr. Regis Ferriere Via Zoom and Kuiper 308
Associate Professor, Ecology and Evolutionary Biology
University of Arizona

[Tuesday, April 18, 2023 - 3:45pm](#)

Dr. Mark Robinson Via Zoom and Kuiper 308
Professor, School Of Earth and Space Exploration
Arizona State University

[Tuesday, April 25, 2023 - 3:45pm](#)

Dr. Chuanfei Dong Via Zoom and Kuiper 308
Staff Research Physicist
Princeton Plasma Physics Laboratory
Princeton University

[Tuesday, May 2, 2023 - 3:45pm](#)

Dr. Tiffany Kataria Via Zoom and Kuiper 308
Scientist, NASA Jet Propulsion Laboratory

Skyward

By Dr. David H. Levy

April 2023

A magic beagle and the stars



Original Art by
Joan Ellen Rosenthal

It is my honor to introduce you, dear readers, this month to my latest book, “Clipper, Cosmos, and Children: Finding the Eureka moment.” It is a book specially designed to inspire young people to enjoy the night sky. Whether you are physically young, or even just young at heart, this new book is meant to inspire you to reach for the stars.

This book’s genesis was one day a few years ago. As I strolled into the office in the east wing of our home, I saw Wendee engrossed in the reading of an old book entitled Clipper. “When did you write this book?” she inquired. “I wrote it when I was ten. Around 1958.” Not a word about the stars in it. “David, this is the best book I have ever read of yours. In fact,” she laughed, “all your other books have gone downhill since this one.” She asked me that day to rewrite Clipper as an astronomy book. I did, and the book is now published by RJI Publishing in 2022 and is available from Amazon for about \$20 or from Starizona here in Tucson.

As I wrote and revised the book during these recent years, my mind frequently wandered back to the simple, carefree time of my youth. The original Clipper was a Bar Mitzvah present for my older brother, Richard. Perhaps my fondest memory of this little beagle dates back to the cloudy evening of December 17, 1965. That was the night I had planned to begin my search for comets. At around 11 pm I took Clipper for a walk up the hill near our house. As I ambled up the streets nearby, I began to notice a small clearing to the west. I quickly decided to hurry home. Clipper had other ideas. As I headed south, Clipper tried to go north. Our tug-of-war lasted a few unforgettable seconds until a quick jerk on the leash persuaded him who was boss. (He was, but he turned around anyway.) At 11:50 that evening, I began my comet search program through a break in the clouds that lasted less than ten minutes. Now, 58 years later, I am still searching for comets.

Each chapter of my book begins with a passage from the original Clipper. In the story, a young boy named Stephen (the original name, now termed for my grandson Matthew Stephen) goes on a nightly adventure with a magic beagle who, with an equally enchanted telescope, takes him on a frolic through the cosmos, seeing the planets, comets, and asteroids, then the stars of our galaxy, and finally to the massive filaments of galaxies that mark the edges of our known universe. Stephen is soon joined by Kaia, a young girl student

There is also a strange extraterrestrial girl named Tania who lives on the Moon. Tania comes from a dream I enjoyed decades ago, at the height of the appearance of my brightest comet in 1990, when I encountered a creature shaped like a box, with four feet and four hands and a small head. “I do not have the power to send comets your way,” Tania told me, “but I can change their orbits just a bit so there is a greater chance that you might find them.” There is even a chapter about nothing, in which Clipper takes the children on a tour across the great voids, bereft of galaxies, that are an integral part of our cosmos.

You are likely all familiar with Peter, Paul, and Mary’s wonderful song about a magic dragon, and how it describes how “a dragon lives forever, but not so girls and boys.” The book’s closing chapter explores what happens when the children grow up and pursue their lives.

The book might be fun, but actually, every telescope, from the tiniest department store telescope to the Webb Space Telescope, is charmed. All it takes is a single, thoughtful gaze that launches you on your own life’s journey across the endless wonder of space and time.

Photos by David Levy



Puppy Clipper



Clipper as an Older Beagle



Dr. David Levy is a long-time member and former President of the TAAA. He is a well know astronomy writer and discoverer of comets. He writes this monthly “Skyward” column for the Vail Voice and generously allows us to publish it here.